THAT WHICH IS CLAIMED IS:

1. Method for generating a required signal with a required frequency equal to the product of a reference frequency and a real number, characterized by the fact that it cyclically comprises a sequence of a measurement phase and a correction phase, by the fact that the measurement phase comprises a first integer division (DV1) of the frequency of an oscillator output signal (OL) by a first integer divider (N+1) so as to obtain a first intermediate signal (SI1), the determination of a first measurement signal representative of the time difference between this first intermediate signal and a reference signal (SRF) at the said reference frequency, a comparison (CMP) between a first comparison signal derived from the first measurement signal and a second comparison signal that depends on the reference period, the integer part (N) and the decimal part (f) of the said real number, and the first integer divider so as to obtain an error signal representative of the time difference between the period of the current output signal from the oscillator and the said required period, and by the fact that the correction phase comprises a deactivation (SW) of the first frequency divider and a correction of the oscillator control starting from the error signal, the oscillator output signal forming the required signal.

2. Method according to claim 1, characterized by the fact that the measurement phase takes place during an integer number of periods of the reference signal (SRF), for example one period, while the

correction phase takes place during another integer number of periods of the reference signal, for example the next period.

3. Method according to claim 1 or 2, characterized by the fact that the second comparison signal comprises a second integer division (DV2) of the oscillator output signal frequency by a second integer divider (N-1) so as to obtain a second intermediate signal, determination of a second measurement signal representative of the time difference between this second intermediate signal and the reference signal, and weighting of the second intermediate signal by a second weighting factor (1-f) obtained from the first integer divider, the integer part and the decimal part of the said real number, by the fact that generation of the first comparison signal includes multiplication of the first measurement signal by a first weighing factor (1+f) obtained from the second integer divider, the integer part and the decimal part of the said real number, and by the fact that the correction phase also comprises deactivation of the second frequency divider.

4. Method according to claim 3, characterized by the fact that the first integer divider is equal to N+1, N being the integer part of the real number, and the second integer divider is equal to N-1, and by the fact that the first weighting factor is equal to 1+f, where f is the decimal part of the real number, and that the second weighting factor is equal to 1-f.

5. Device for generation of a required signal with a required frequency equal to the product of a

reference frequency and ("product of x and y" "division of x by y" multiplication of "x" by (or and) "y") a real number, characterized by the fact that it comprises:

- a controlled oscillator (VCO),
- a first division means (DV1) capable of making a first integer division of the voltage controlled oscillator output signal frequency by a first integer divider so as to obtain a first intermediate signal,
- first determination means (CP1) capable of determining a first measurement signal representative of the time difference between this first intermediate signal and a reference signal with the said reference frequency,
- first generation means (PPD1) capable of generating a first comparison signal derived from the first measurement signal,
- second generation means (B2) capable of generating a second comparison signal dependent on the reference period, the integer part and the decimal part of the said real number and the said first integer divider,
- comparison means (CMP) capable of making a comparison between the two comparison signals so as to obtain an error signal representative of the time difference between the period of the current output signal from the oscillator and the said required period,

- a switch (A) connected between the output from the comparison means and the oscillator control input, and
- control means (MCM) capable of opening and closing the switch successively and cyclically and deactivating the first divider when the switch is closed, so as to successively enable determination of the error signal and to deliver this error signal on the oscillator control input, the oscillator output signal forming the said required signal.

6. Device according to claim 5, characterized by the fact that the control means (MCM) open and then close the switch during successive periods of the reference signal.

7. Device according to claim 5 or 6, characterized by the fact that the second generation means comprise:

- a second divider (DV2) capable of making a second integer division of the oscillator output signal frequency,
- second determination means (CP2) capable of determining a second measurement signal representative of the time difference between this second intermediate signal and the reference signal, and
- second weighting means (PPD2) capable of weighting the second intermediate signal by a second weighting factor obtained from the first integer divider, the integer

part and the decimal part of the said real number

- by the fact that the first generation means comprise first weighting means (PPD1) capable of weighting the first measurement signal by a first weighting factor obtained from the second integer divider, the integer part and the decimal part of the real number, and
- by the fact that the control means (MCM) are also designed to deactivate the second divider when the switch is closed.

8. Device according to claim 7, characterized by the fact the first integer divider is equal to N+1, where N is the integer part of the real number, and the second integer divider is equal to N-1, and by the fact that the first weighting factor is equal to 1+f, where f is the decimal part of the real number, and that the second weighting factor is then equal to 1-f.

9. Device according to any one of claims 5 to 8, characterized by the fact that it is made in the form of an integrated circuit.

10. Terminal of a wireless communication system, characterized by the fact that it comprises a device according to one of claims 5 to 9.

11. Terminal according to claim 10, characterized by the fact that it forms a mobile cell phone.